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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,462	09/29/2006	Gheorghe Sorin Stan	NL 040330	9390

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EXAMINER
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ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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11/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,462	<b>Applicant(s)</b> STAN, GHEORGHE SORIN	
	<b>Examiner</b> JORGE L. ORTIZ CRIADO	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2009 and 08 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/02/2009 has been entered.

### ***Allowable Subject Matter***

The indicated allowability of claims 14-17 and 8-9 are withdrawn in view of the newly discovered reference(s) to JP02004079103, and with the following office action results.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-15 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. JP 2004-079103.

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Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device, **capable of** writing information in a storage layer of a multi-layer optical storage medium comprising two or more storage layers, the medium access device comprising: light beam generating means (laser diode not shown; [0012]) for generating a write light beam; focusing means (19;28; 38; 42; and CPU) for focusing the write light beam in a focal spot at a target storage layer;

write inhibit means for inhibiting (44; 46; 28; CPU; Fig. 2) a writing process in case of an axial focus displacement event (acceleration detection), wherein the write inhibit means is designed to monitor at least one input signal capable of indicating an axial focus displacement (acceleration), to determine a speed with which said at least one input signal changes in time (defined by acceleration), and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes;

As per in claim 15, Harada et al. discloses the write inhibit means being designed to inhibit the writing process if a time-derivative (defined as acceleration, which is a time derivative) of said at least one input signal predicts an axial focus displacement event (see Fig. 2; Abstract).

As per claim 17, Harada et al. discloses wherein the time-derivative is higher than a first order time derivative (it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing).

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Claims 18 and 19 are drawn to the access device using the method of claims 14 and 15 above and rejected for the same reasons of anticipation.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable Harada et al. JP 2004-079103.

Harada et al. discloses wherein a time-derivative particularly of a higher than a first order time derivative, because it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing.

The first order derivative corresponds to merely the velocity displacement of a moving object, which one of ordinary skill in the art would have found obvious that such analogous interrelationship for time derivative were at the time of the invention known.

It is notoriously well known that if  $x$  were the position of an object and  $t$  the time, then the first derivative is the velocity, the second the acceleration, and this would describe the

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motion of the object. Hence, the mere selection of the derivative to be used is a mere design choice and/or design equivalent analogous alternative at the time of the invention.

Claims 1-7 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412.

As per claim 1, Kono discloses a method of writing information in a storage layer of a multi-layer optical storage medium comprising two or more storage layers, the method comprising acts of: determining if axial focus displacement indicators indicate that an axial focus displacement event has occurred, otherwise determining that the axial focus displacement has not occurred; and

inhibiting the writing process in case of an axial focus displacement event occurrence (as performed by focus monitor 16; [0026]; [0033]).

Furthermore, Kono not only teaches monitor one signal, also teaches for least two or three signals capable of indicating an axial focus displacement, for instance signal as provided to 16 in Fig. 1 and as provided to 17 in Fig. 2.

Kono also provide that is several (two or more) signals can be inputted to a means to so that they are monitored together, for instance, as taught in Fig. 1, means (15/16), teaches at least two inputs, Fig. 3, means 19, has at least two inputs etc.

Although, Kono does not expressly disclose having two inputs to the write inhibit means, from the above teachings, it would have been obvious to one of an ordinary skill in the art at the time of the invention to provide two or three inputs for inputting the signals taught by Kono, and

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monitor all signals as desired, providing integration, robustness and reliability of the access device.

As per claim 2, is rejected for the same reasons of obviousness outlined above, Kono further discloses such medium access device capable of writing information in a storage layer of a multi-layer optical storage medium comprising two or more storage layers; the medium access device comprising: light beam generating means for generating a write light beam; focusing means (8) for focusing the write light beam in a focal spot at a target storage layer; write inhibit means (16) for inhibiting a writing process only if the axial focus displacement event has occurred (see [0026]; [0033]).

As per claim 3, Kono further discloses comprising a driver circuit (4) for driving the light beam generating means in accordance with a data signal representing data to be written, the driver circuit having a control input; wherein the write inhibit means (16) have an output coupled to said control input of the driver circuit, the write inhibit means being designed to generate a command signal for the driver circuit such as to effectively inhibit the driver circuit in case of an axial focus displacement event (see Fig. 2).

As per claim 5, for the same reasons of obviousness as outline above, Kono teachings would show wherein the write inhibit means (16) has at least three inputs for receiving at least three different input signals capable of indicating an axial focus displacement; the write inhibit means being designed to monitor at least two (Q1; Q2) of its input signals and to inhibit the

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writing process if at least two of the input signals are indicative in a correlated way of the occurrence of an axial focus displacement event (See Fig. 5).

As per claim 6, for the same reasons of obviousness as outline above, Kono teachings would show, having at least two inputs for receiving at least one input signal capable of indicating an axial focus displacement; the write inhibit means being designed to monitor an input signal, to calculate an axial focus displacement (Q) from the input signal, and to decide that the input signal is indicative of an axial focus displacement event if the calculated axial focus displacement exceeds a predetermined displacement threshold (Th1).

As per claim 7, for the same reasons of obviousness as outline above, Kono teachings would show wherein the write inhibit means has at least two inputs for receiving at least two input signals capable of indicating an axial focus displacement; the write inhibit means being designed to monitor an input signal, to monitor for the possible occurrence of a predefined characteristic (S signal) feature of the input signal, and to decide that the input signal is indicative of an axial focus displacement event if such characteristic feature occurs (See Figure 5).

As per claim 11, for the same reasons of obviousness as outline above, Kono teachings further comprising at least one optical detector (7) for receiving light reflected from the storage medium; the write inhibit means (16) being designed to monitor at least one signal derived from at least one detector output signal (see Fig. 1).



As per claim 12, for the same reasons of obviousness as outline above, Kono teachings the write inhibit means (16) being designed to monitor at least one of a signal corresponding to the reflected central aperture signal obtained from a forward-sense diode of the sensor, or to monitor at least a signal corresponding to the focal error signal (S), or to monitor at least a signal corresponding to the focal error signal integrated with a predetermined time constant (see Fig. 5).

As per claim 13, Kono discloses capable of handling at least one of DVD-discs or BD discs.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412 in view of Harada et al. JP 2004-079103.

Kono also provide that is several (two or more) signals can be inputted to a means to so that they are monitored, but does not expressly disclose monitoring to determine the speed with which said at least one of its input signals changes in time or such as a time-derivative, and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

However, it such monitored input signal are well known in the art as evidenced by Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device having such write inhibit means for inhibiting (44; 46; 28; CPU; Fig. 2) a writing process in case of an axial focus displacement event (acceleration detection), wherein the write inhibit means is designed to monitor at least one input signal capable of indicating an axial focus displacement (acceleration),

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to determine a speed with which said at least one input signal changes in time (defined by acceleration), and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

it would have been obvious to one of an ordinary skill in the art at the time of the invention to monitor such speed change in time as taught by Harada et al, in order to avoid write errors and prevent and anticipate such possible errors by detection of the speed changes, as taught by Harada et al.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412 in combination with Harada et al. JP 2004-079103 and further in view of Hayashi et al. US Patent Application Publication 20020101803.

Although the combination above does not expressly shows having at least one vibration/acceleration sensor and the write inhibit means being designed to monitor at least an output signal from the at least one vibration/acceleration sensor. It is well known in the art the use of such vibration sensors to monitor vibrations or disturbances in the optical system as to inhibit writing operations in response to such events, as evidenced by Hayashi et al. (see Fig. 1; #100).

It would have been obvious to one of an ordinary skill in the art to provide a vibration sensor to monitor the same in order to avoid error in the writing operations by interrupting the writing in response to an event of shocks etc. as taught by Hayashi et al.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JORGE L. ORTIZ CRIADO whose telephone number is (571)272-7624. The examiner can normally be reached on Mon.-Fri 10:00 am- 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge L Ortiz-Criado/  
Primary Examiner, Art Unit 2627